Davis County, Utah Inspection/Maintenance Program 2012 Program Report



OCTOBER 15, 2013

Response to 40 CFR Part 51 – Subpart S Inspection/Maintenance Program Requirements 51.366 Data Analysis and Reporting Requirements

40 CFR Part 51 - Subpart S Inspection/Maintenance Program Requirements 51.366 - Data Analysis and Reporting Requirements

Reporting Requirement	Reviewer Comments / Location in State Report	Has State Met Requirement
(a) Test Data Report The program shall submit to EPA by July of each year a report providing basic statistics on the testing program for January through December of the previous year, including:		
(1) The number of vehicles tested by model year and vehicle type;	191,750 Total Vehicles Tested 18,811 Total Failures 9.810% Centralized and Decentralized Programs Centralized Totals Include Diesel Vehicles Decentralized 95< 24,289 96> 141,707 Total 165,996 17,159 Failures 10.337% Centralized 95< 2,126 96> 23,628 Total 25,754 1,652 Failures 6.41% (See additional reports, # 3 Initial Emission Inspection Failures by Test Type, Model Year and Vehicle Type .)	

The number of vehicles tested by test type:

Total OBD Vehicles Tested Centralized and Decentralized Program Includes Diesel Vehicles

153,049 Total OBDII Vehicles Tested

79 % of Total Vehicles Tested were OBDII (191,750)

Decentralized Program

136,509 71 % of Total Vehicles Tested (191,750)

89 % of Total OBDII Vehicles Tested (153,049)

Centralized Program

16,540 8.6 % of Total Vehicles Tested (191,750)

11 % of Total OBDII Vehicles Tested (153,049)

31,713 Total TSI Vehicles Tested

5437 Failures 17.1 %

16.5 % of Total Vehicles Tested were TSI (191,750)

Decentralized Program

29,479 15.4 % of Total Vehicles Tested (191,750)

93 % of Total TSI Vehicles Tested (31,713)

	Centralized Program
	2,234 1.2 % of Total Vehicles Tested (191,750)
	7 % of Total TSI Vehicles Tested (31,713)
	6,980 Total Diesel Vehicles Tested Centralized Program - by Snap Test or J1667
	6,980 3.6 % of Total Vehicles Tested (191,750)
	Light Duty Diesel – J1667
	5,887 3.1 % of Total Vehicles Tested (191,750)
	84.3 % of Total Diesel Vehicles Tested (6,980)
	Heavy Duty Diesel – Snap Test
	1,093 .06 % of Total Vehicles Tested (191,750)
	16 % of Total Diesel Vehicles Tested (6,980)
	(See additional reports Davis 2012 – Question 1 for details by model year and vehicle type.)
(2) By model year and vehicle type, the number and percentage of vehicles:	
(i) Failing initially, per test type;	191,750 Total Vehicles Tested
	18,811 Total Vehicles Failed Initial Test

9.81 % of Total Vehicles Initially Tested

153,049 Total OBD II Tests 80 % of Total tests
16,540 Centralized 10.8 % of Total OBD II tests
136,509 Decentralized 89.2 % of Total OBD II tests
12,983 Total OBD II Initial Failures
8.50 % OBD II Initial Fail Rate

69 % of Total Initial Vehicle Failures

Decentralized Program

136,509 Total Tests 12030 Initial Failing 8.8 % Fail rate 12,030 64 % of Total Initial Vehicle Failures (18,811)

92.7 % of Total OBD II Initial Vehicle Failures (12,983)

6.3 % OBD II Initial Fail Rate (191,750)

Centralized Program

16,540 Total Tests 953 Initial Failing 5.8 % Fail rate
953 5.1 % of Total Initial Vehicle Failures (18,811)
.073 % of Total OBDII Initial Vehicle Failures (12,983)

.005 % OBDII Initial Fail Rate (191,750)

31,713 Total TSI Tests 17 % of Total tests (191,750)
29,479 Decentralized 93 % of Total TSI tests
2234 Centralized 7 % of Total TSI tests
5,437 Total TSI Initial Failures 17.14 % Initial Fail
29 % of Total Initial Vehicle Failures (18,811)

Decentralized Program

29,455 Initial TSI Tests 5,152 Initial Failing

5,152 27 % of Total Initial Vehicle Failures (18,811)

94.8 % of Total TSI Initial Vehicle Failures (5,152)

2.7 % TSI Initial Fail Rate (191,750)

Centralized Program

2,234 Initial TSI Tests 261 Initial Failing 11.7% Fail rate

261 1.4 % of Total Initial Vehicle Failures (18811)

5.2 % of Total TSI Initial Vehicle Failures (5,152)

.001 % TSI Initial Fail Rate (191,750)

6,988 Total Diesel Tests 3 % of Total Tests (191,750)
460 Total Diesel Failures 2.4 % of Total (18,811)
6.6 % Diesel Initial Fail Rate (6,988)
.002 % of Total Initial Vehicle Failures (191,750)

Centralized Program – Light Duty Diesel J1667

5,887 Initial Dyno Tests 379 Initial Failures

.03 % of Total Tests (191,750)

379 2 % of Total Initial Vehicle Failures (18,811)

66 % of Total Diesel Initial Vehicle Failures (460)

5.4 % Light Duty Diesel Initial Fail Rate (6,988)

Centralized Program – Heavy Duty Diesel Snap

1101 Initial HD Snap Tests 81 Initial Failures

.01% of Total Tests (191,750)

81 .004 % of Total Initial Vehicle Failures (18,811)

18 % of Total Diesel Initial Vehicle Failures (460)

1.2 % Heavy Duty Diesel Initial Fail Rate (6,988)

(See additional report, Davis 2012 Question 2i Vehicles Failing Initially)

(ii) F	ailing	the	first	retest	per	test	tvpe:
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19,564 Vehicles Failing First Retest by Test Type 5914 Failures 30.23 % of Vehicles Tested Failed the First Retest

> Decentralized Program 18,320 Total Vehicles Tested 5,661 Failures- 30.9 % Failure Rate

Centralized Program
1244 Total Vehicles Tested
253 Failures- 20.34 % Failure Rate

12,728 OBD II Total Tests
3,594 Total OBDII Vehicles Failed the First Retest

28.24 % OBDII Fail Rate

60.8% of First Retest Failures were OBDII (5914)

Decentralized Program

12,094 TOTAL TESTS

3445 FAILURES 58.3% of first retest failures (5914)

96 % of Total OBDII first retest failures (3594)

27 % OBDII Fail Rate (12,728)

Centralized Program

634 Total Tests 149 Failures 23.50 % of first retest failures 4 % of Total OBDII first retest failures (3,594)

1 % OBDII Fail Rate (12,728)

6412 Total TSI Tests

2,250 Total TSI Vehicles Failed the First Retest
35 % TSI Fail Rate (6412)

38 % of First Retest Failures were TSI (5914)

Decentralized Program

6223 Total Tests 2215 Failures 36 % of first retest failures

98.4 % of Total TSI first retest failures (2,250)

34.5 % TSI Fail Rate (6,412)

Centralized Program

189 Total Tests 35 Failures 18.52 % of Total first retest failures

2.0 % of Total TSI first retest failures (2,250)

.5 %TSI Fail Rate (6,412)

424 Total DIESEL Tests

70 Total Diesel Vehicles Failed the First Retest

16.5 % Diesel Fail Rate

.012% of First Retest Failures were Diesel (5914)

Centralized Program – Light Duty Diesel J1667

343 Total Tests 46 Failures 13.41 % of Total first retest failures

.008 % of Total Diesel first retest failures (5914)

10.8 % Light Duty Diesel Fail Rate (424)

Centralized Program – Heavy Duty Diesel Snap

81 Total Tests 24 Failures 29.63 % of Total first retest

failures

.004% of Total Diesel first retest failures (5914)

5.7 % Heavy Duty Diesel Fail Rate (424)

(See additional report, Davis 2012 Question 2ii Vehicles Failing Initially)

(iii) Passing the first retest per test type;	13,650 Vehicles Passing First Retest by Test Type (19,564) TOTAL TESTS
	7 % of Total Vehicles Passing the First Retest
	9,134 Total OBDII Vehicles Passed the First Retest
	67 % of OBDII Vehicles Passed the First Retest
	(12,728)
	47 % of Vehicles Passing First Retest were OBDII
	(19,564)
	Decentralized Program
	8,649 Total Passing OBD II retests 3,445 Failures
	40 % Decentralized Pass Rate
	95 % of OBDII vehicles passing were Decentralized (9,134)
	Centralized Program
	485 Total Passing OBD II retests 149 Failures
	76.3 % Centralized Pass Rate (634 total retests)
	5 % of OBDII vehicles passing were Centralized (9,134)

4,162 Total TSI Vehicles Passed the First Retest
6412 Total tests 2250 Failures
65 % TSI Vehicles passed the First Retest
21 % of Vehicles passing the First Retest were TSI (19564)

Decentralized Program

6,223 Total retests 97 % of first passing retests (6,412)
64 % Decentralized Pass Rate (4,008 Passing)
96 % of TSI vehicles passing were Decentralized (4,162)

Centralized Program

189 Total retests 35 Failures 18.52 % of first passing retests (1244)

82% Centralized Pass Rate (154)

154 Passing 4 % of TSI vehicles passing were Centralized (4,162)

424 Total Diesel Vehicles Tested

70 Passed the First Retest

16.5 % of Diesel Vehicles Passed the First Retest

.004 % of Vehicles Passing the First Retest were Diesel (19,564)

Centralized Program – Light Duty Diesel J1667

343 Total tests 46 Failures 13.41 %

297 Passing .0152 % of first passing retests

24 % Light Duty Diesel Vehicles Passed the CENTRALIZED

first retest (1244)

Centralized Program – Heavy Duty Diesel Snap

78 Total Tests 23 Failures 29.49 %

55 .003 % of first passing retests (19,564)

.04 % of Heavy Duty Diesel Vehicles Passed the CENTRALIZED first retest (1244)

(See additional report, Davis 2012 Question 2iii Vehicles Passing the First Retest)

(iv) Initially failed vehicles passing the second or subsequent retest per test type; Our contractor,	19,564 TOTAL RETESTS	
Worldwide Environmental, does not track the failures by 2 nd , 3 rd etc. failures. We have some generalized failure numbers for subsequent retests.	137 Centralized single (1st) retest failures: 007 %	
Tetests.	116 Centralized multiple retest failures: .006 %	
	2303 Decentralized single(first) retest failures: 11.8 %	
	3358 Decentralized multiple retest failures 17.2 %	
	5918 Total retest failures: 30.2 %	
(v) Initially failed vehicles receiving a waiver; and	N/A	

(xii) Failing the on-board diagnostic check;	12,95 7 % 8.46 %	Of Total Vehicles Tested	
	Subtotals	% Vehicles Failing OBD Test	Program
	12,006	6 %	Decentralized
	946	.001%	Centralized
		ee additional report Davis 2012– Que assing/ Failing the On-Board Diagno	
(xiii) Failing the on-board diagnostic check and passing the tailpipe test (if applicable);	N/A		
(xiv) Failing the on-board diagnostic check and failing the tailpipe test (if applicable);	N/A		
(xv) Passing the on-board diagnostic check and failing the I/M gas cap evaporative system test (if applicable);	SEE REPORT	# 15	
(xvi) Failing the on-board diagnostic check and passing the I/M gas cap evaporative system test (if applicable);	SEE REPORT	# 2	

(xvii) Passing both the on-board diagnostic check and I/M gas cap evaporative system test (if applicable);	SEE REPORT # 16				
(xviii) Failing both the on-board diagnostic check and I/M gas cap evaporative system test (if applicable);	SEE REPORT # 1				
(xix) MIL is commanded on and no codes are stored; #8	66,283	icles with MIL On and No DTCs St	tored.		
	44 % of T	otal OBD Vehicles Tested			
	Subtotals:	% of Total OBD Vehicles Tested	Program:		
	136,490	89 %	Decentralized		
	16,533	11 %	Centralized		
	(See additi	onal report Davis 2012 – Question (2	xix)		
	MIL is comma	anded on and no codes are stored for	details)		
(xx) MIL is not commanded on and codes are stored; # 9	6,185 Vehicles	with MIL Off and DTCs stored.			
,	.04 % of Total OB	.04 % of Total OBD Vehicles Tested			
	Subtotals:	% of Total OBD Vehicles Tested	Program:		
	5,674	.03%	Decentralized		
	511	.01%	Centralized		
	(See additi	2xx)			
	MIL is not cor				

(xxi) MIL is commanded on and codes are stored; # 7	7,214 .05 %	Vehicles with MIL	On and DTCs stor	red.	
	Subtot		D Vehicles Tested	Program:	
	6,46			Decentralized	
			170		
	74	.01%		Centralized	
	(See	additional report Davis	2012 – Question (2	2xxi)	
	MIL i	s commanded on and co	des are stored for d	etails)	
(xxii) MIL is not commanded on and codes are not stored; # 10	85,252	Vehicles with MIL (Off and No DTCs	Stored	
	56 %	of Total	OBD Vehicles Tes	sted	
	Subtotals	% of Total OBD	Vehicles Tested	Program	
	76,495	50 %	Dece	entralized	
	8,757	6 %	Cen	tralized	
		additional report Davis and commanded on and co			
(xxiii) Readiness status indicates that the evaluation is not complete for any module supported by on-board diagnostic systems; # 11	11,441	Vehicles No	ot Ready for OBD	Test	

		of Total OBD Vehicles Tes 7 % .001% ditional report Davis 2021 – Que	Decentralized Centralized Stion (2xxiii)	
(3) The initial test volume by model year and test station; # 6	See additional re	nitial test volume by model year a sport Davis 2012 – Question 3 In sodel Year and Test Station for	nitial Test Volume by	
(4) The initial test failure rate by model year and test station; and # 6	See additional re	tial test failure rate by model year port Davis 2012 – Question 4 T by Model Year and Test Station	he Initial Test Failure	
(5) The average increase or decrease in tailpipe emission levels for HC, CO, and NOX (if applicable) after repairs by model year and vehicle type for vehicles receiving a mass emissions test.	N/A			
(b) Quality assurance report.				

The program shall submit to EPA by July of each year a report providing basic statistics on the quality assurance program for January through December of the previous year, including:		
(1) The number of inspection stations and lanes:		
(i) Operating throughout the year; and	137 Stations Total; 144 Total Lanes; 134 Decentralized Stations with one lane each; Two Decentralized Stations with two lanes each. One Centralized Testing Facility with six (6) testing lanes. 103 Basic test Stations; 34 Repair Facilities	
(2) The number of inspection stations and lanes operating throughout the year:	137	
(i) Receiving overt performance audits in the year;	137 Stations received overt performance audits and 144 lanes received overt performance audits.	
(ii) Not receiving overt performance audits in the year;	0	
(iii) Receiving covert performance audits in the year;	6 Stations, each with one lane, received a covert audit.	
(iv) Not receiving covert performance audits in the year; and	A total of 131 Stations did not receive a covert audit.	

(v) That have been shut down as a result of overt performance audits;	0	
(3) The number of covert audits:		
(i) Conducted with the vehicle set to fail per test type;	All 5 covert audits were for an OBDII type test, and all audits were conducted with the vehicle set to fail. Two vehicles were used to perform covert audits.	
(ii) Conducted with the vehicle set to fail any combination of two or more test types;	5	
(iii) Resulting in a false pass per test type;	2	
(iv) Resulting in a false pass for any combination of two or more test types;	2	
(4) The number of inspectors and stations:		
(i) That were suspended, fired, or otherwise prohibited from testing as a result of covert audits;	 5 Technicians received a fourteen (14) day permit suspension. 3 Stations received a thirty (30) day permit probationary period. 	
(ii) That were suspended, fired, or otherwise prohibited from testing for other causes; and		
(iii) That received fines;	1	

(5) The number of inspectors licensed or certified to conduct testing;	1,721	
(6) The number of hearings:	2	
(i) Held to consider adverse actions against inspectors and stations; and	2	
(ii) Resulting in adverse actions against inspectors and stations;	2 stations were revoked from the program.	
(7) The total amount collected in fines from inspectors and stations by type of violation;	\$2,500.00	
(8) The total number of covert vehicles available for undercover audits over the year; and	2	
(9) The number of covert auditors available for undercover audits.	Staff	
(c) Quality control report		
The program shall submit to EPA by July of each year a report providing basic statistics on the quality control program for January through December of the previous year, including:		

(1) The number of emission testing sites and lanes in use in the program;	137 Stations Total; 144 Total Lanes; 134 Decentralized Stations with one lane each; Two Decentralized Stations with two lanes each; One Centralized Testing Facility with six testing lanes.
(2) The number of equipment audits by station and lane;	548 Total Overt Audits High Volume Stations assigned for monthly equipment audits, all receiving at least one audit per month.
	1st Qtr 2nd Qtr 3rd Qtr 4th Qtr Stations Audited: 219 219 219 Lanes Audited: 77 77 77 Monthly Audits: 40 40 40 Not Audited: 0 0 0
	Low Volume Stations with one lane each, assigned quarterly equipment audits:
	1st Qtr 2nd Qtr 3rd Qtr 4th Qtr Stations Audited: 297 297 297 297 Quarterly Audits: 99 99 99 99 Not Audited: 0 0 0 0
	Station audits are performed on a monthly or quarterly basis. Not all stations were opened January thru December 2012. Some Stations opened and others closed mid year. The auditor has the option to perform data analysis for a two (2) to four (4) week period at the analyzer to see if anomalies are present. All audits require a gas calibration audit through the probe tip to assure accuracy. Auditors are encouraged to witness an actual I/M test while at the station. Any actions are taken on an "as needed" basis. The gas audit procedure includes a leak check, zero calibration, gas audit and station performance check. The 2,064 overt

	audits performed in 2012 do not include such actions as updating technician and station expiration dates, floppy disk errors, manual loading of certificate numbers, phone/modem issues and any other issue that would require a physical visit. The four stations missing a quarterly audit did receive audits during the other three quarters of the year.	
(3) The number and percentage of stations that have failed equipment audits; and	52 Stations failed equipment audits 3 %	
(4) Number and percentage of stations and lanes shut down as a result of equipment audits.	0 Stations shut down as a result of equipment audits 0 %	
(5) Additional Actions:	Station/Technician Violations Failure to Inspect: 14 Pass a Failing Vehicle: 18 Pass a Tampered Vehicle: 6 Inaccurate/Incomplete Data: 12 Improper Tampering Inspection: 18 Actions Suspension: 3 Probation: 3 Formal Warning: 10 Overt Verbal Warning: 20 Other Actions - Analyzer Failed Required Leak Test: 25 O2 Sensor Failure/Slow Response: 10 Audit Gas Calibration Failures: 0 Printer Problems: 15 Hose, Fittings, Filters: 20 Miscellaneous Items: 86	

(d) Enforcement report. (1) All varieties of enforcement programs shall, at a minimum, submit to EPA by July of each year a report providing basic statistics on the enforcement	On-Site Actions Verbal Warnings: 52 Floppy Disk Errors: 0 Load/Void Certificates: 28 OBDII Issues: 22 No Communication Lockouts: 0 Analyzer Issues/Problems: 45 Technician/Station Permits: 65 Phone Modem: 5 Other Activities Waivers: 1 Undercover Covert Audits: 6 Smoking Vehicle Complaints: 120 Covert Formal Warnings: 0	
program for January through December of the previous year, including:		
(i) An estimate of the number of vehicles subject to the inspection program, including the results of an analysis of the registration data base;	Grand Total: 230,110 Total Vehicles Exempt due to State Legislation (Model Years 2008, 2010 & 2012): 38,360 Non-Exempt Vehicles: 191,750	
(ii) The percentage of motorist compliance based	We are unable to provide an answer at this time. There were 191750	

upon a comparison of the number of valid final tests with the number of subject vehicles;	vehicles tested in Davis County in 2012. These vehicles were a combination of vehicles registered in all four Utah counties which have I/M programs, Weber, Davis, Salt Lake and Utah. Likewise, Davis County vehicles were tested in Weber, Salt Lake and Utah counties.	
(iii) The total number of compliance documents issued to inspection stations;	200,000 Davis County residents are able to receive I/M tests in Weber, Salt Lake and Utah Counties, and certificate numbers issued to stations in 2011 that were unused in 2012 were available for use.	
(iv) The number of missing compliance documents;	Certificate of Compliance numbers are loaded into the Analyzer via the internet connection thru the VID, or input into the analyzer by the auditor, and assigned by the analyzer with each test used. There are no missing compliance documents.	
(v) The number of time extensions and other exemptions granted to motorists; and	Family Use – Employment, Health, Religion, Travel, Work, Other: 580 Out of County Purchase – Emission Test Unavailable: 121 Total: 701	
(vi) The number of compliance surveys conducted, number of vehicles surveyed in each, and the compliance rates found.	N/A	
(2) Registration denial based enforcement programs shall provide the following additional information:		

(i) A report of the program's efforts and actions to prevent motorists from falsely registering vehicles out of the program area or falsely changing fuel type or weight class on the vehicle registration, and the results of special studies to investigate the frequency of such activity; and	When a suspect vehicle comes to our attention, we investigate it. We have no formal report to present. All fuel types and weight classes (1968 and newer gas, and all model years diesel vehicles) are inspected in Davis County.	
(ii) The number of registration file audits, number of registrations reviewed, and compliance rates found in such audits.	N/A. We would like suggestions of how to strengthen this aspect of our program.	
(3) Computer-matching based enforcement programs shall provide the following additional information:		
(i) The number and percentage of subject vehicles that were tested by the initial deadline, and by other milestones in the cycle;	N/A	
(ii) A report on the program's efforts to detect and enforce against motorists falsely changing vehicle classifications to circumvent program requirements, and the frequency of this type of activity; and	N/A	
(iii) The number of enforcement system audits, and the error rate found during those audits.	N/A	

(4) Sticker-based enforcement systems shall provide the following additional information:		
(i) A report on the program's efforts to prevent, detect, and enforce against sticker theft and counterfeiting, and the frequency of this type of activity;	N/A	
(ii) A report on the program's efforts to detect and enforce against motorists falsely changing vehicle classifications to circumvent program requirements, and the frequency of this type of activity; and	N/A	
(iii) The number of parking lot sticker audits conducted, the number of vehicles surveyed in each, and the noncompliance rate found during those audits.	N/A	
(e) Additional reporting requirements. In addition to the annual reports in paragraphs (a) through (d) of this section, programs shall submit to EPA by July of every other year, biennial reports addressing:		
(1) Any changes made in program design, funding, personnel levels, procedures, regulations, and legal authority, with detailed discussion and evaluation of the impact on the program of all such changes; and	In June of 2012, Davis County, in cooperation with our newly selected contractor, Worldwide Environmental Products inc., implemented a new analyzer and VID program that will give us live data stream capabilities through the VID, facial recognition at the analyzer and better reporting,	

	real time testing and improved covert activities. Worldwide was also selected to perform Centralized light, medium and heavy duty Diesel testing at our Kaysville facility. Worldwide is also our contractor for technician training, referee station and issues all waivers as required. VIN mismatch is a large portion of our enforcement program. We have the capability to gather PID data and are in the process of implementing a enforcement program that can drill down and capture the PID data for the suspect vehicle as well as the tested vehicle and compare them with like vehicles. This will improve our enforcement program dramatically. We are also capturing live camera tests at the analyzer and can perform video audits on a regular basis.	
(2) Any weaknesses or problems identified in the program within the two-year reporting period, what steps have already been taken to correct those problems, the results of those steps, and any future efforts planned.	Due to the improvements of the database and real time VID, facial recognition, and other improvements stated above, Davis County will have a more robust program and secure program.	